

Rec'd PCT/PTO 03 OCT 2005

## PATENT COOPERATION TREATY

PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)



(PCT Article 36 and Rule 70)

REC'D 22 AUG 2005

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10/551774

Applicant's or agent's file reference N.88299A TAC	<b>FOR FURTHER ACTION</b>		See Form PCT/PEA/416
International application No. PCT/GB2004/001353	International filing date (day/month/year) 31.03.2004	Priority date (day/month/year) 04.04.2003	
International Patent Classification (IPC) or national classification and IPC C09C1/62, C09C1/64, C09C3/04, C09D17/00, C09D5/38, C09D11/02, C09B67/00			
Applicant SILBERLINE LIMITED et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 5 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand  04.02.2005		Date of completion of this report  18.08.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Rhodes, K  Telephone No. +49 89 2399-8259 	

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

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**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-25

as originally filed

**Claims, Numbers**

1-31

received on 04.02.2005 with letter of 03.02.2005

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	2, 4-12, 15-20, 23, 24, 26, 27, 29-31
	No: Claims	25, 28
Inventive step (IS)	Yes: Claims	2, 4-12, 15-20, 23, 24
	No: Claims	26, 27, 29-31
Industrial applicability (IA)	Yes: Claims	1-31
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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**Re Item I**

**Basis of the report**

No opinion has been established with regard to claim 1 and all claims dependent thereon.  
The reasons therefor are as follows:

The amendments filed with the International Bureau under Article 19(1) introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 19(2) PCT.

As laid out under item 20.21 and in the Appendix to Chapter 20 of the PCT International Search and Preliminary Examination Guidelines, issued by the World Intellectual Property Organization, an amendment to the claims or the addition of a new claim must be supported by the description of the invention as originally filed.

According to the aforementioned Appendix, a negative limitation that is added in a new claim or by amendment will raise a new matter issue if the subject matter being excluded does not have support in the application as filed (A20.21[1]).

Furthermore, a negative limitation or disclaimer with no basis in the application as filed is permissible where the limitation or disclaimer is added to overcome accidental anticipation by a reference or to exclude parts of a claim for reasons other than novelty, such as for lack of industrial applicability or insufficient disclosure (A20.21[2]).

Claim 1 introduces a disclaimer to exclude subject-matter therefrom. This exclusion is not supported by the description of the alleged invention as originally filed, and thus adds new subject-matter. Furthermore, the disclaimer having no basis in the application as filed is not permissible as it has not been added to overcome accidental anticipation over the prior art. The anticipation cannot be considered as being accidental as the document D3 (US-A-5 849 072), which discloses the matter excluded from present claim 1, is in the same technical field as the present application and would have been known to the applicant.

Claims 4-12, 15-20, and 23-28 have only been examined insofar as they are dependent on claim 2, as opposed to claim 1 or claims wholly dependent on claim 1.

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**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Reference is made to the following documents:**

D3: US-A-5 849 072 (APPLEYARD COLIN ET AL) 15 December 1998

**2. Novelty**

Document D3 discloses the formation of metal pigment dispersions for use in paints, lacquers or inks. The process of formation comprises milling the metal flake with a milling aid (crushing aid), said milling aid containing no fatty acids, fatty acid derivatives or white spirits, wherein the milling aid also serves as the binding agent for the paint, lacquer or ink. Suitable milling aids are listed in claim 1 and include ketones and polyesters. The metal pigment may be aluminium, copper, zinc or alloys thereof (claim 1). Claim 10 mentions alcohols and esters as a solvent for the crushing aid/binding agent employed in the process. It is possible to use further additives such as lubricating agents (column 3, lines 51-54).

As the process of present **claim 2** specifies that alcohols and esters are used in the absence of other agents in the milling fluid, said claim is novel over the process of D3, which does not disclose either of these as the crushing aid (Article 33(2) PCT).

Claim 3 has not been examined as it is dependent on unallowable claim 1.

**Claims 4-12, 15-20 and 23** are also novel, insofar as they are dependent on claim 2.

Claims 13, 14, 21 and 22 have not been examined as they are dependent on unallowable claims 1 and 3.

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**Claim 24** relates to the use of alcohols and esters in the milling of a metal powder as claimed in claim 2 or any claim dependent thereon. As it is not seen in the prior art to use these in the absence of any other additives or aids, as specified in claim 2, claim 24 is novel.

Claims 25-31 all comprise "product-by-process" features, wherein the product is characterized in terms of its process of manufacture. According to Chapter 5 of the PCT International Search and Preliminary Examination Guidelines, issued by the World Intellectual Property Organization, where a claim defines a product in terms of the process by which the product is made, the claim as a whole is directed to a product and not to its method of manufacture. Such a claim lacks novelty if a prior art product, even if made by an undisclosed process, appears to be inherently the same as, or indistinguishable from, the claimed subject matter (Item 5.26).

Where a product can only be defined by the process steps by which the product is made, or where the manufacturing process would be expected to impart distinctive characteristics on the final product, the examiner would consider the process steps in determining the subject of the search and assessing patentability over the prior art (Item 5.27). This is not the present case.

The Appendix to Chapter 5 states that, where a claim defines a product in terms of the process by which the product is made, the claim should be construed as a claim to the product *per se* that possesses the characteristics derived from the manufacturing process stated in the claim. Therefore, the patentability of a product defined by a product-by-process claim does not depend on its method of production. A product is not rendered novel merely by the fact that it is produced by means of a new process. If the product in such a claim is the same as, or obvious from, a product described in an item of prior art, the claim is unpatentable even though the product described in the item of prior art was made by a different process (A5.26[1])

At present it is not considered that the compositions of **claims 25 and 28** are novel, despite the fact that it is not entirely clear what are the physical characteristics thereof. All that is known about these compositions is that they comprise at least a metal powder and either an ester or an alcohol. Such products are known from the

prior art (see, for instance, claim 10 of D3). Furthermore, as no comparative examples have been presented, it is not possible to determine whether the present process of manufacture leads to a product having different characteristics.

The granules and articles comprising said granules, according to **claims 26, 27, and 29-31**, although not described in terms of their physical features, must be novel over D3 as the prior art document concerns the manufacture of a metal flake dispersion and not of granules therefrom.

### **3. Inventive Step**

The problem to be solved by the present application is the provision of a process for the preparation of a low volatility metal flake pigment.

The applicant has convincingly argued that the process of **claim 2** and its dependent **claims 4-12, 15-20 and 23** provide a solution to the problem posed. Said claims are, thus, accorded with an inventive step.

It is not thought that the granules and articles comprising said granules, according to **claims 26, 27 and 29-31**, are inventive. As discussed under Item 2, it is thought that the paste of claim 25 and the ink or surface coating composition of claim 28 are known in the prior art. As compositions comprising a metal flake, an alcohol or ester, and a binding agent are known from D3 (see claim 10), it is not considered inventive to add a binder to the known materials of claims 25 and 28 and form granules therefrom. The granulation of such compositions, together with the shaping of particles comprising the aforementioned granules, would be an obvious procedural method for those skilled in the art.

### **4. Industrial Applicability**

The process of the present application is of clear industrial applicability in the field of pigment production.

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